UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,796	10/01/2001	David M. Goldenberg	IMMU:007US3	3640

37013 7590 12/12/2007

ROSSI, KIMMS & McDOWELL LLP.
P.O. BOX 826
ASHBURN, VA 20146-0826

EXAMINER	
HARRIS, ALANA M	

ART UNIT	PAPER NUMBER
1643	

MAIL DATE	DELIVERY MODE
12/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/965,796	GOLDENBERG, DAVID M.	
	Examiner	Art Unit	
	Alana M. Harris, Ph.D.	1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 October 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24-27,36-44,47,52,55-59,98 and 99* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *24-27, 36-44, 47, 52, 55-59, 98 and 99* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment and Arguments

1. Claims 24-27, 36-44, 47, 52, 55-59, 98 and 99 are pending.

Claims 98 and 99 have been added.

Claims 24-27, 36-44, 47, 52, 55-59, 98 and 99 are examined on the merits.

Maintained and New Grounds of Rejection

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The rejection of claims 24-26, 36-38, 44, 47, 52, 55-57, 98 and 99 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent number 5,789,554 (filed July 31, 1996), and in further view of Maloney et al. (Blood 84(8): 2457-2466, October 15, 1994/ IDS reference A11) and Li et al. (Cellular Immunology 118: 85-99, 1989) is maintained and made.

Applicants argue the instant rejection is improper and there is no support in the record suggesting therapy using a combination of antibodies, see Remarks submitted October 1, 2007, last paragraph. Applicants also aver *In re Kerkhoven* is not applicable to the instant claims because "[i]n biology and chemistry, two separate agents can be antagonistic, agonistic, additive, or synergistic, and no one can predict the result until it

is tried", see page 6, last paragraph of the Remarks. Applicants assert unexpected results as documented in published papers that accompanied the Remarks. Applicants' response, arguments, points of view, as well as the papers submitted have been carefully considered, but found unpersuasive.

Patent '554 clearly teaches the administration of LL2 antibodies in conjugate form to potentiate it therapeutic ability, see column 2, lines 44-61. The LL2 antibodies are bound to therapeutic agents, which will maximize its value in B-cell malignancy treatment. Maloney taught the efficacy of a naked anti-CD20 monoclonal antibody for treating B-cell leukemias and lymphomas. The teachings of both documents reasonably establish motivation to combine the two antibodies for a method of treatment, especially in light of their success in individual treatments. *In re Kerkhoven* supports the Examiner's position, one of ordinary skill in the art would have been motivated to combine these two antibody compositions for the enhancement of B-cell malignancy treatment modality.

The papers submitted by Applicants all set forth epratuzumab as the CD22 antibody used in combination with CD20 antibody, rituximab or IMMU-106. The prior art teaches LL2 monoclonal antibody, which is distinct from the CD22 antibody listed in Applicants' supporting references. The claims do not limit with any particularity specific antibodies to be implemented in the claimed invention, hence arguments based upon these papers are not commensurate. However, the teachings of any of the papers does not preclude one of ordinary skill in the art from combining two antibody compositions with established known functions. The two antibodies taught in the prior art of record

were known to effectively treat B-cell malignancies so it would be reasonable to infer together would only potentiate the other. For these reasons and those of record the rejection is maintained.

Furthermore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to administer the anti-CD20 antibody before or concurrently with the anti-CD22 immunoconjugate in order to effectively treat B-cell malignancies. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by teachings well known in the art, that dosages of any pharmaceutical composition must be adjusted and optimized. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

4. The rejection of claims 24-27, 36-38, 44, 52, 55-57, 98 and 99 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent number 5,789,554 (filed July 31, 1996), and further in view of Maloney et al. (Blood 84(8): 2457-2466, October 15, 1994/IDS reference A11) and U.S. Patent number 5,106,955 (April 21, 1992) is maintained and made. The teachings of patent #5,789,554 and Maloney have been presented in the previous cited 103(a) rejection. Those two references did not teach a method for treating a B-cell malignancy wherein the therapeutic composition comprises specifically chemotherapeutic drugs, a nitrosourea derivative, hormones and an antiviral toxin linked via crosslinking agents.

The papers submitted by Applicants all set forth epratuzumab as the CD22 antibody used in combination with CD20 antibody, rituximab or IMMU-106. The prior art teaches LL2 monoclonal antibody, which is distinct from the CD22 antibody listed in Applicants' supporting references. The claims do not limit with any particularity specific antibodies to be implemented in the claimed invention, hence arguments based upon these papers are not commensurate. However, the teachings of any of the papers does not preclude one of ordinary skill in the art from combining two antibody compositions with established known functions. The two antibodies taught in the prior art of record were known to effectively treat B-cell malignancies so it would be reasonable to infer together would only potentiate the other. For these reasons and those of record the rejection is maintained.

Furthermore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to administer the anti-CD20 antibody before or concurrently with the anti-CD22 immunoconjugate in order to effectively treat B-cell malignancies. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by teachings well known in the art, that dosages of any pharmaceutical composition must be adjusted and optimized. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

12. The rejection of claims 24-26, 36-42, 44, 52, 55-57, 98 and 99 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent number 5,789,554 (filed July 31, 1996), in view of Maloney et al. (Blood 84(8): 2457-2466, October 15, 1994/ IDS reference A11), U.S. Patent Number 5,686,072 (filed February 22, 1994/IDS reference A1) and WO 95/09917 (April 13, 1995/IDS reference A5) is maintained and made.

The papers submitted by Applicants all set forth epratuzumab as the CD22 antibody used in combination with CD20 antibody, rituximab or IMMU-106. The prior art teaches LL2 monoclonal antibody, which is distinct from the CD22 antibody listed in Applicants' supporting references. The claims do not limit with any particularity specific antibodies to be implemented in the claimed invention, hence arguments based upon these papers are not commensurate. However, the teachings of any of the papers does not preclude one of ordinary skill in the art from combining two antibody compositions with established known functions. The two antibodies taught in the prior art of record were known to effectively treat B-cell malignancies so it would be reasonable to infer together would only potentiate the other. For these reasons and those of record the rejection is maintained.

Furthermore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to administer the anti-CD20 antibody before or concurrently with the anti-CD22 immunoconjugate in order to effectively treat B-cell malignancies. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by teachings well known in the art, that dosages of any pharmaceutical composition must be adjusted and optimized. "[W]here

the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

13. The rejection of claims 24-26, 36-39, 44, 45, 52, 55-57, 60-70, 73-77, 91-93, 98 and 99 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent number 5,789,554 (filed July 31, 1996), in view of in view of Maloney et al. (Blood 84(8): 2457-2466, October 15, 1994/IDS reference A11) and European Patent Application 0 510 949 A2 (October 28, 1992/IDS reference A4) is maintained and made.

The papers submitted by Applicants all set forth epratuzumab as the CD22 antibody used in combination with CD20 antibody, rituximab or IMMU-106. The prior art teaches LL2 monoclonal antibody, which is distinct from the CD22 antibody listed in Applicants' supporting references. The claims do not limit with any particularity specific antibodies to be implemented in the claimed invention, hence arguments based upon these papers are not commensurate. However, the teachings of any of the papers does not preclude one of ordinary skill in the art from combining two antibody compositions with established known functions. The two antibodies taught in the prior art of record were known to effectively treat B-cell malignancies so it would be reasonable to infer together would only potentiate the other. For these reasons and those of record the rejection is maintained.

Furthermore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to administer the anti-CD20 antibody

before or concurrently with the anti-CD22 immunoconjugate in order to effectively treat B-cell malignancies. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by teachings well known in the art, that dosages of any pharmaceutical composition must be adjusted and optimized. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

14. The rejection of claims 24-27, 36-38, 43, 44, 52, 55-89, 98 and 99 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent number 5,789,554 (filed July 31, 1996), and further in view of Maloney et al. (Blood 84(8): 2457-2466, October 15, 1994/IDS reference A11) and U.S. Patent number 5,698,178 (filed April 8, 1998) is maintained and made.

The papers submitted by Applicants all set forth epratuzumab as the CD22 antibody used in combination with CD20 antibody, rituximab or IMMU-106. The prior art teaches LL2 monoclonal antibody, which is distinct from the CD22 antibody listed in Applicants' supporting references. The claims do not limit with any particularity specific antibodies to be implemented in the claimed invention, hence arguments based upon these papers are not commensurate. However, the teachings of any of the papers do not preclude one of ordinary skill in the art from combining two antibody compositions with established known functions. The two antibodies taught in the prior art of record were known to effectively treat B-cell malignancies so it would be reasonable to infer

together would only potentiate the other. For these reasons and those of record the rejection is maintained.

Furthermore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to administer the anti-CD20 antibody before or concurrently with the anti-CD22 immunoconjugate in order to effectively treat B-cell malignancies. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by teachings well known in the art, that dosages of any pharmaceutical composition must be adjusted and optimized. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

15. The rejection of claims 24-27, 38, 43, 44, 52, 55-89, 98 and 99 rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/04925 (22 February 1996/IDS reference A8), and further in view of Maloney et al. (Blood 84(8): 2457-2466, October 15, 1994/ IDS reference A11) and U.S. Patent number 5,698,178 (filed April 8, 1998) maintained and made.

The papers submitted by Applicants all set forth epratuzumab as the CD22 antibody used in combination with CD20 antibody, rituximab or IMMU-106. The prior art teaches LL2 monoclonal antibody, which is distinct from the CD22 antibody listed in Applicants' supporting references. The claims do not limit with any particularity specific antibodies to be implemented in the claimed invention, hence arguments based upon

these papers are not commensurate. However, the teachings of any of the papers does not preclude one of ordinary skill in the art from combining two antibody compositions with established known functions. The two antibodies taught in the prior art of record were known to effectively treat B-cell malignancies so it would be reasonable to infer together would only potentiate the other. For these reasons and those of record the rejection is maintained.

Furthermore, it would have been *prima facie* obvious to one of ordinary skill in the art at the time the claimed invention was made to administer the anti-CD20 antibody before or concurrently with the anti-CD22 immunoconjugate in order to effectively treat B-cell malignancies. One of ordinary skill in the art would have been motivated to do so with a reasonable expectation of success by teachings well known in the art, that dosages of any pharmaceutical composition must be adjusted and optimized. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235(CCPA 1955).

Double Patenting

16. The provisional rejection of claims 24-27, 36-44, 47, 52, 55-59, 98 and 99 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24-47 of copending Application No. 10/314,330 (filed December 9, 2002) is maintained.

Applicant requests for the instant rejection to be held in abeyance until indication of allowable subject matter has been indicated at which time they would consider filing a terminal disclaimer.

The request has been considered. At this point in prosecution the rejection is maintained for the reasons of record in listed in the first action on the merits (FAOM) mailed April 4, 2005.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

18. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Alana M. Harris, Ph.D. whose telephone number is (571)272-0831. The Examiner works a flexible schedule, however she can normally be reached between the hours of 7:30 am to 6:30 pm, with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry R. Helms, Ph.D. can be reached on (571) 272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ALANA M. HARRIS, PH.D.
PRIMARY EXAMINER

Alana M. Harris, Ph.D.
29 November 2007